



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,539	09/30/2003	Mark Maney	03RE076/YOD REEL:0046	5965

7590 06/27/2005

Alexander M. Gerasimow  
Allen-Bradley Company, LLC  
1201 South Second Street  
Milwaukee, WI 53204-2496

EXAMINER

TAMAI, KARL I

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/675,539

Applicant(s)

MANEY ET AL.

Examiner

Tamai IE Karl

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-36 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/22/2005.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 28 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 28 is vague and indefinite because it depends from a cancelled claim. For the purposes of advancing prosecution on the merits, the examiner will assume claim 28 depends from claim 23. Claim 31 does not provide antecedent basis for "the frame". Claim 32 does not appear to further limit the parent claim 29. Claim 32 does not provide antecedent basis for "the central ducts".

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3-5, 7, 8, 10-13, 15, 18, 19, 21, 23-25, 27-28, 30, 32, and 34-36 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Gutjahr et al. (Gutjahr)(DE 199 17 409). Gutjahr teaches a laminated stator with a central aperture for the rotor and a plurality of slots. The outer periphery defining a square with chamfered corners. The lamination having a plurality of corner ducts 23 in each of the corners with a cantilevered fins 22 and a plurality of center ducts 27 to cool the laminations. It is inherent that the corner and center ducts are configured to force air into the center ducts. Gutjahr shows the fins equally spaced to balance the airflow and cool the lamination. Gutjahr shows channels 4 in the rotor 4 for cooling air flow 28.

7. Claims 1, 3-8, 10-14, 17-19, 21-24, 27-28, and 34-36 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Koyama et al. (Koyama)(JP 57-129,139). Koyama teaches a laminated stator with a central aperture for the rotor and a plurality of slots for the winding 3. The winding extending from the side of the core such that they are inherently in slots. The outer periphery defining a square with chamfered corners. The lamination having a plurality of mirrored corner ducts in each of the corners with a cantilevered fins/projections and a plurality of mirrored center ducts to cool the

Art Unit: 2834

laminations. It is inherent that the corner and center ducts are configured to force air into the center ducts. The drawings show the cooling projections equally spaced around the passages 11b to balance the air flow in the ducts.

8. Claims 1, 3-8, 10-14, 17-19, 21-24, 27-28, and 34-36 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Furukawa et al. (Furukawa)(JP 03-049542). Furukawa teaches a laminated stator core 11 with a central aperture for the rotor and a plurality of slots 15 for the winding. The outer periphery defining a square with chamfered corners. The laminations (figure 1) having a plurality of mirrored corner ducts in each of the corners with a cantilevered fins/projections and a plurality of mirrored center ducts to cool the laminations. The examiner notes that the drawings do not label the circular openings adjacent the air passages 13, but the drawings can be used for what they reasonably convey to a person of ordinary skill in the art (*In re Aslanian*, 590 f.2d 911, 200 UPSQ 500 CCPA (1979)). It is inherent that the corner and center ducts are configured to force air into the center ducts. The drawings show the cooling projections equally spaced around the passages 11b to balance the air flow in the ducts.

9. Claims 7-10, 12-15, 17-19, and 21-24 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Harano et al. (Harano)(US 4406959). Harano teaches a laminated stator core 3 with a central aperture for the rotor and a plurality of slots 15 for the winding. The outer periphery defining a square with chamfered corners. The

Art Unit: 2834

laminations (figure 2) having a plurality of mirrored corner ducts in each of the corners with a cooling fins and a plurality of mirrored center ducts to cool the laminations. It is inherent that the corner and center ducts are configured to force air into the center ducts.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa et al., Koyama et al., or Gutjahr et al., in further view of Nakamura (JP 60-020749). Furukawa et al., Koyama et al., or Gutjahr et al. each teach every aspect of the invention except the ducts configured to flow air through the gap between the rotor and

Art Unit: 2834

the inner periphery of the lamination. Nakamura teaches the airflow through the motor extending through the rotor, stator, and the air gap therebetween to provide improved cooling of the stator. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Furukawa, Koyama, or Gutjahr with the airflow between the stator laminations and the rotor to improve the cooling of the machine as taught by Nakamura.

13. Claims 14 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa et al., Koyama et al., or Gutjahr et al., in further view of Nakamura (JP 60-020749). Furukawa et al., Koyama et al., or Gutjahr et al. each teach every aspect of the invention except the ducts configured to flow air through the gap between the rotor and the inner periphery of the lamination. Nakamura teaches the airflow through the motor extending through the rotor, stator, and the air gap therebetween to provide improved cooling of the stator. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Furukawa, Koyama, or Gutjahr with the airflow between the stator laminations and the rotor to improve the cooling of the machine as taught by Nakamura.

14. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa et al., Koyama et al., or Gutjahr et al., in further view of Jarczyński et al. (Jarczyński)(US 5633543). Furukawa et al., Koyama et al., or Gutjahr et al. each teach every aspect of the invention except the ducts configured to balance the flow air stator

Art Unit: 2834

ducts. Jarzczynski teaches the stator ducts should be spaced to provide a balanced airflow and uniform temperatures. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Furukawa, Koyama, or Gutjahr with the stator ducts balanced to provide uniform temperatures and cooling flows.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (571) 272 - 2036.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg, can be reached at (571) 272 - 2044. The facsimile number for the Group is (703) 872 - 9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Karl I Tamai  
PRIMARY PATENT EXAMINER  
June 19, 2005

  
KARL TAMAI  
PRIMARY EXAMINER